Joint IUSSP/PERN/EAPS Webinar on

Climate Change and Population Dynamics

September 16, 2021

Q&As

1 Hello, Maam and Sir,My Self Narendra Kumar from India and i am a Ph.D. Student. My Submission is, i am working on a research paper under the title of "Distribution of population under the climate risk/weather risk: A spatial study of Himalaya Region" How, I standardized and calculate the risk factors according population.
NARENDRA KUMAR (dr.naren87jrf@gmail.com)

- Wow! What a big and important topic! I can't answer all of this here but please feel free to email me! klgrace@umn.edu

2 What modeling approach are you using as in what software, Kathryn?
Berit Mohr (berit-mohr@hotmail.de)

- I use R primarily for statistical analysis but for the climate/vegetation data generation/aggregation we use python/ENVI. Please reach out for more info - happy to share code!
- I am very interested in conducting research on climate induced migration by integrating geospatial data into an agent-based model.
- My background is GIS and remote sensing but for my PhD I wish to use land use/land cover data that I will create and induce them into an agent-based model environment..."

3 Hi Kathryn, thanks for the excellent presentation. I am curious to know how the climate change can impact the fertility in the short and long term? Will the impact be same or different?
Khandaker Jafor Ahmed (khandaker.ahmed@adelaide.edu.au)

- oh wow!! This is THE question, right? It really depends on what spatial/temporal scale we're thinking about, IMO. We see shifts in childbearing goals based on seasonal agricultural variability - where it seems as though women may want fewer children soon after a bad season. But we see after a good season that women might actually want more children! We also see that higher temps suppress conceptions but only for a short period of time. So it's not clear if the suppressed conceptions will fully be made up for or if it will change the way women plan their pregnancies.

4 For Dr. Kathryn Grace. Despite climate change the fertility level in developing countries is still on the high side and considering the fact that developing countries are in a different stage of population transition different from what is obtainable in the developed countries
is the effect of climate change on reproductive health same across the globe? What are the implications of climate change on reproductive health in developing countries (especially when fertility rate is still high? Is the changes similar to what is obtainable elsewhere.)
Isaac Oluwatimilehin (timiayo4christ@gmail.com)

- Thanks for the question! In my opinion there is likely to be variability because family planning differs childbearing goals differ (in part because of the need for children to provide care to parents as they age). I also wonder about the increase in spontaneous abortion (infant mortality/child malnutrition) in a context of climate change and if that kind of insecurity around childbearing will shape how people make decisions about childbearing.

5 @Kathryn thanks for your talk! Could you comment on the potential effect of climate change on increasing poverty and digging of inequalities, and that it may cause delays in education attainment and well-being of women, which would lead to higher fertility.
Camille Belmin (belmin@pik-potsdam.de)

- Yes! Complicated! I know Heather Randell has some work on this question of education and climate change. I do wonder if shifts in childbearing goals will occur as infant mortality/child malnutrition/spontaneous abortion all increase. Women's needs/interests in family planning seems to be responsive to food insecurity/bad seasons in that bad seasons/fewer household resources seems to reduce childbearing goals and increase demand for family planning. So there's a lot to think about here.

6 Kathryn, in the context of COVID one current issue that is being discussed among the reproductive health community is the resilience of the health system to shocks (pandemic, natural hazards, conflict). There are some illustrative examples in the literature on Zika and Ebola but would be great to see more
Jason Bremner (jasonleebremner@gmail.com)

- Yes, so this would be more along the lines of "extreme events". How do extreme events show up in women's lives? What is the spatial/temporal footprint. This is similar to what we're considering in that Lancet Planetary Health paper but we were looking at combined impacts of conflict and climate on acute malnutrition. There is a literature on conflict and fertility (see Thiede et al. for some work on Africa, some of my stuff on fertility in Guatemala, Clifford et al. on Tajikistan).

8 What re the exceptions on the modelling tying fertility to climate change
Tellson Ojogun (ojogun@unfpa.org)

- I'm not sure I understand the question - can you tell me more?

9 Thanks for your answer. Yes, we can expect different effects on fertility.
Khandaker Jafor Ahmed (khandaker.ahmed@adelaide.edu.au)

- Yep! Indeed! Also different space/time interactions.

10 Thanks Dr. Gray, agree with you that the focus on climate trapping receives more attention, though media will constantly grab onto the xenophobic story. I think we need to do a better job of pointing out that the media is propagating racial tropes
Jason Bremner (jasonleebremner@gmail.com)

- Completely agree, Dr. Bremner!

11 Clark - is there a lot of research on modeling trapped populations? And how would you go about this?

- I do like that idea - it would be great to have further communication on that." Berit Mohr berit-mohr@hotmail.de (Not enough yet! But some, as reviewed in the papers I listed at the start. Here is another relevant paper: Nawrotzki, R. J., & DeWaard, J. (2018). Putting trapped populations into place: Climate change and inter-district migration flows in Zambia. Regional environmental change, 18(2), 533-546.)
- Are you intending to move into this space?
- I believe Helene Benveniste at Harvard is beginning to do some work in this area.

12 Could you share a list of all the references that were mentioned during the presentations?
Berit Mohr (berit-mohr@hotmail.de)

- Hoffmann, R., Dimitrova, A., Muttarak, R., Cuaresma, J. C., & Peisker, J. (2020). A meta-analysis of country-level studies on environmental change and migration. Nature Climate Change, 10(10), 904-912.
- Kaczan D. J. & Orgill-Meyer (J. (2020). The impact of climate change on migration: a synthesis of recent empirical insights. Climatic Change) 158(3) 281-300.
- Šedová B. Čizmaziová (L.) & Cook A. (2021). A meta-analysis of climate migration literature (No. 29). Center for Economic Policy Analysis. https://publishup.uni-potsdam.de/opus4-ubp/frontdoor/deliver/index/docId/49982/file/cepa29.pdf

13 Are there any examples showing increased education in the US impacting US fertility or is the research mostly related to the global south?
Kelley Dennings (kdennings@gmail.com)

- In the highly developed low fertility countries the educational fertility differentials are less pronounced than during demographic transition. In some countries e.g. in Scandinavia there even is U-shaped pattern with more educated women being more empowered to meet their desired family size of two children

14 Does SSPs include a situation of depopulation or population decrease, e.g., Japan?
Oh Seok Kim (oskim@korea.ac.kr)

- Yes, the population of Japan is declining under all SSPs but to a different degree
- Thank you, sir! Is there a list of countries showing decreasing populations as for the SSPs?

15 How do you respond to the many "birth bust" articles showing up in the media lately?
Kelley Dennings (kdennings@gmail.com)

- (live answered)

16 How far back can we potentially trace these effects of climate change? We know the changes did not start yesterday! so, is some kind of historical data/studies showing these effects?
Alejandra Rodriguez Sanchez (rodrisad@hu-berlin.de)

17 Is there a list of countries showing decreasing populations as for the SSPs?
Oh Seok Kim (oskim@korea.ac.kr)

- it depends on the SSPs but you could check the data here: https://secure.iiasa.ac.at/web-apps/ene/SspDb/dsd?Action=htmlpage&page=about"
- Thank you 😊

18 Thank you Wolfgang for raising this point about demographers engagement with climate change research. To all of you, what messages should we be emphasizing to attract a new generation of demographers to this area of research?
Elizabeth Fussell (elizabeth_fussell@brown.edu)

19 Hi, this is Kees van der Geest of United Nations University Institute for Environment and Human Security (UNU-EHS). I have a question for Clark Gray.
Kees van der Geest (geest@ehs.unu.edu)

- (live answered)

20 Thank you for all your very interesting presentations. I would have a question to Dr. Gray. I feel like migration is receiving very much attention but other adaptation forms exist and are put into place by the population. Do you think there is an interest in approaching migration in parallel to other adaptations their interactions and influences on one another?
Jelena Luyts (jelena.luyts@unamur.be)

- Many data sources do not allow this, but multi-purpose HH panel surveys such as LSMS, IFLS, CHNS, MxFLS are a good source!

21 Thank you all panelists for an insightful session. When asked about the intersection between population and environment many of us respond: it's complex. And this certainly seem to be the case. Now, another complex issue is planned relocation / managed retreat. This could potentially change the population composition of many areas, including large coastal cities worldwide. What are the types of impacts the panelists anticipate and how could we examine this using a demographic lens?
Ricardo Safra de Campos (r.safra-de-campos@exeter.ac.uk)

- (live answered)
- Thanks Alex, I missed the first 30 minutes of the webinar. Will try and watch the first half later on.

22 Welcome to more on Population and Environmental Change:
Elizabeth Thomson (elizabeth.thomson@sociology.su.se)

23 https://www.kva.se/sv/kalendarium/webinar-population-and-environmental-change
Elizabeth Thomson (elizabeth.thomson@sociology.su.se)

24 I think that it was Dr Gray who mentioned the predicted disappearance of subsistence farmers in regions affected by climate change. Will this give way to more homogenous methods of agriculture and if so, what will that mean for ongoing climate change and for global food supplies?
Marge Fauvelle (Marge_Fauvelle@hotmail.com)

25 Thank you for your answer Prof. Kathryn. I think the nexus between climate change and abortion, infant mortality/malnutrition and even family child-bearing goals will be an interesting topic of interest. Thank you ma'am.
Isaac Oluwatimilehin (timiayo4christ@gmail.com)

- Thank you for your answer Prof. Kathryn. I think the nexus between climate change and abortion, infant mortality/malnutrition and even family child-bearing goals will be an interesting topic of interest. Thank you ma'am.